

**AMENDMENTS TO THE SPECIFICATION**

Please amend the following paragraphs:

[0051] At this time, the EM sensor includes a first transparent insulating layer on the [[overcoat]] insulating layer, wherein the first coil array is formed between the first transparent insulating layer and the [[overcoat]] insulating layer; and a second transparent insulating layer on the first transparent insulating layer, wherein the second coil array is formed between the first transparent insulating layer and the second transparent insulating layer.

[0135] Then, the EM sensor 300 includes the X-axis coils 31 of the transparent electrode substance formed on the upper substrate 51 or the lower substrate 52 at the fixed intervals, the first transparent insulating layer 34 on an entire surface of the transparent substrate 30 including the X-axis coils 31 for flattening, the Y-axis coils 35 on the first transparent insulating layer 34 in perpendicular to the X-axis coils 31, and a second transparent insulating layer [[48]] 38 on an entire surface of the first transparent insulating layer 34 for flattening. At this time, the first and second transparent insulating layer 34 and 38 are formed of an inorganic insulating layer such as SiO<sub>x</sub> or SiN<sub>x</sub>, or an organic insulating layer such as PhotoAcryl, BenzoCycloButen BCB or Polyamide compound. In case the EM sensor 300 is formed on the inner surface of the upper substrate 51 or the lower substrate 52 in the LCD panel 500, a position of the EM sensor 300 varies according to a driving method.

[0141] In the TN mode, a liquid crystal layer 63 is driven with a vertical type electric field between the pixel electrode 63 of the lower substrate 52 and the common electrode 74 of the upper substrate 51. For preventing interference with the operation of liquid crystal molecules in TN mode, the overcoat layer 73, in which the EM sensor 300 is formed, is beneficially thick. It is also beneficial to form the light-shielding layer 71, the overcoat layer 73 of a material having a low dielectric constant, and the color filter layer 72 between the EM sensor 300 and the common electrode [[7]] 74. Accordingly, in an LCD panel 500 according to the fifth embodiment of the present invention, the EM sensor 300 is formed on an inner surface of the upper substrate 51, whereby the EM sensor 300 is formed in one body with the upper substrate 51.

[0155] In this structure, the EM sensor 300 is formed on the lower substrate 52 including the common electrode 67 and the pixel electrode 63. At this time, the EM sensor 300 may have

effect on the In-Plane switching mode electric field generated between the common electrode 67 and the pixel electrode 63. In this respect, an insulating layer 69 having a predetermined thickness is formed on an uppermost surface of the lower substrate 52, a thin film transistor array substrate, to flat the lower substrate 52. For example, the insulating layer 69 is formed of an organic insulating layer such as PhotoAcryl, BenzoCycloButen BCB or Polyamide.